



SUBCOOLING

Procedure:

- Use gauges to determine the pressure at the condenser coil outlet, and a thermometer to get the actual temperature at the same point.
- Use the Temperature column to get the temperature
- Subcooling = Saturated Temperature - Actual Temperature

Example: Find the amount of subcooling on a system using Genetron 410a (R-410a) when the liquid line temperature reads 115°F and the liquid line pressure is 430 psig.

✓ 430 psig yields 122

✓ Degree of Subcooling = $122^{\circ}\text{F} - 115^{\circ}\text{F} = 7^{\circ}\text{F}$



SUPERHEAT

Procedure:

- Use gauges to determine the pressure at the evaporator coil outlet, and a thermometer to get the actual temperature at the same point.
- Get the temperature from the temperature column
- Superheat = Actual Temperature - Saturated Temperature

Example: Find the superheat on a system which uses Genetron 410 (R-410a) when the pressure at the evaporator outlet reads 120 psig and your surface thermometer reads 50°F

✓ 120 psig yields ~41°F

✓ Degree of Superheat = $50^{\circ}\text{F} - 40^{\circ}\text{F} = 10^{\circ}\text{F}$



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Honeywell Advanced Materials

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PT CHART FOR GENETRON® AZ-20® (R-410A)

Genetron AZ-20 (R-410A)
pressure is about 60%
(1.6 times) greater than R-22.

Only use servicing equipment and components designed for AZ-20 (R-410A).

- Use filter driers with service pressure rating of at least 600 psig.

GENETRON AZ-20 (R-410A)										
PRESSURE BASED PT CHART										
PSIG	°F		PSIG	°F		PSIG	°F		PSIG	°F
10	-41.1		165	58.1		320	100.4		475	129.6
15	-33.7		170	59.9		325	101.5		480	130.4
20	-27.2		175	61.6		330	102.6		485	131.2
25	-21.4		180	63.2		335	103.7		490	132.0
30	-16.1		185	64.8		340	104.7		495	132.8
35	-11.3		190	66.5		345	105.8		500	133.6
40	-6.8		195	68.0		350	106.8		505	134.4
45	-2.6		200	69.6		355	107.8		510	135.2
50	1.3		205	71.1		360	108.8		515	135.9
55	5.0		210	72.6		365	109.8		520	136.7
60	8.5		215	74.0		370	110.8		525	137.5
65	11.8		220	75.5		375	111.8		530	138.2
70	14.9		225	76.9		380	112.8		535	139.0
75	18.0		230	78.3		385	113.7		540	139.7
80	20.9		235	79.7		390	114.7		545	140.4
85	23.6		240	81.0		395	115.6		550	141.2
90	26.3		245	82.4		400	116.6		555	141.9
95	28.9		250	83.7		405	117.5		560	142.6
100	31.4		255	85.0		410	118.4		565	143.3
105	33.8		260	86.3		415	119.3		570	144.0
110	36.1		265	87.5		420	120.2		575	144.8
115	38.4		270	88.8		425	121.1		580	145.5
120	40.6		275	90.0		430	122.0		585	146.1
125	42.8		280	91.2		435	122.9		590	146.8
130	44.9		285	92.4		440	123.7		595	147.5
135	46.9		290	93.6		445	124.6		600	148.2
140	48.9		295	94.8		450	125.4		605	148.9
145	50.8		300	95.9		455	126.3		610	149.5
150	52.7		305	97.1		460	127.1		615	150.2
155	54.5		310	98.2		465	128.0			
160	56.4		315	99.3		470	128.8			